

GENERAL NOTES:

1. ALL SYSTEMS SHALL BE COMPLETE AND FULLY FUNCTIONAL.
2. PROVIDE SUBMITTAL INFORMATION ON EQUIPMENT TO BE INSTALLED FOR REVIEW BY TENANT PRIOR TO INSTALLATION.
3. MATERIALS OF EQUAL QUALITY AND CAPABILITY MAY BE SUBSTITUTED FOR SPECIFIED HARDWARE WITH APPROVAL OF TENANT.
4. CONFIRM LOCATION OF EQUIPMENT WITH TENANT PRIOR TO CONSTRUCTION.
5. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
6. PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST INTERNATIONAL MECHANICAL AND ENERGY CONSERVATION CODES IN ADDITION TO THE CITY OF COLLEGE STATION REQUIREMENTS. PER CITY OF COLLEGE STATIONS THESE INCLUDE THE 2015 INTERNATIONAL MECHANICAL AND ENERGY CONSERVATION CODES.
7. REMOVE ALL DEMOLISHED EQUIPMENT FROM SITE.
8. PATCH, PAINT AND/OR REPAIR DAMAGED LOCATIONS TO MATCH ADJACENT SURFACES.

MECHANICAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC IN NATURE, NOT ALL REQUIRED ELBOWS, TEES OR FITTINGS ARE SHOWN. CONTRACTOR SHALL PROVIDE A COMPLETE WORKING SYSTEM PER DRAWINGS AND THE INTERNATIONAL BUILDING CODES.
2. CORE DRILL OR SAW CUT STRUCTURE FOR PENETRATION OF NEW PIPE. AT EACH WALL OR FLOOR PENETRATION PROVIDE STEEL SLEEVES AND FIRE STOP SEALANT.
3. SUPPORT NEW DUCT FROM STRUCTURE ABOVE UTILIZING EXPANSION ANCHORS, THREADED RODS, SADDLES, HANGAR RODS, BEAM CLAMPS AND ANGLES AS NECESSARY.
4. ALL SUPPLY DUCT (EXCLUDING FLEX DUCT) SHALL BE GALVANIZED STEEL CONSTRUCTED IN ACCORDANCE WITH SMACNA GUIDELINES.
5. ALL PIPING TO BE CONCEALED WITHIN WALLS WHERE POSSIBLE.
6. COORDINATE WORK WITH OTHER CONTRACTORS.
7. ROUTE 1" PVC CONDENSATE PIPE TO NEAREST SEWER LINE DRAIN WITH WORKING TRAP.
8. TEST, ADJUST AND BALANCE HVAC SYSTEM AS SHOWN. ALL AIR BALANCE WORK SHALL BE IN ACCORDANCE WITH NEBB OR ASHRAE STANDARDS. REPORT RESULTS ON STANDARD FORMS.
9. PROVIDE ALL WORK IN ACCORDANCE WITH FEDERAL, STATED, CITY OF GALVESTON, ASHRAE AND SMACNA STANDARDS.

KEYED NOTES

- ① DEMOLISH EXISTING 30 TON FURNACE, CONTROLS, ASSOCIATED DRAINS AND REFRIGERANT PIPING.
- ② DEMOLISH EXISTING 10 TON FURNACE, CONTROLS, ASSOCIATED DRAINS AND REFRIGERANT PIPING.
- ③ DEMOLISH EXISTING 5 TON FURNACE, CONTROLS, ASSOCIATED DRAINS AND REFRIGERANT PIPING.
- ④ DEMOLISH EXISTING 30 TON CONDENSER, CONTROLS AND ASSOCIATED REFRIGERANT PIPING.
- ⑤ DEMOLISH EXISTING 10 TON CONDENSER, CONTROLS AND ASSOCIATED REFRIGERANT PIPING.
- ⑥ DEMOLISH EXISTING 5 TON CONDENSER, CONTROLS AND ASSOCIATED REFRIGERANT PIPING.

SPLIT SYSTEM HEAT PUMP – INDOOR UNIT SCHEDULE

EQUIPMENT NO.	SERVICE	SUPPLY CFM	MIN. O.A. AIR CFM	EXT. S.P. (N. W.G.)	COOLING CAPACITY (BTU/HR.)	HEAT PUMP HEATING CAPACITY (BTU/HR.)	BACKUP ELECTR. RESIST. HEATING		ELECTRICAL		MANUFACTURER & MODEL	OPTIONS-ACCESSORIES
							KW	MBH	VOLT.-PH.-CY.	AMPS		
AHU-1	NORTHEAST SANCTUARY	1600	0	0	60,000	60,000	0	0	208/1/60	6.0	INGERSOLL RAND TEM	ECM MOTOR, BAC-NET INTERFACE
AHU-2	NORTHWEST SANCTUARY	1600	0	0	60,000	60,000	0	0	208/1/60	6.0	INGERSOLL RAND TEM	ECM MOTOR, BAC-NET INTERFACE
AHU-3	SANCTUARY LOFT	1600	0	0	60,000	60,000	0	0	208/1/60	6.0	INGERSOLL RAND TEM	ECM MOTOR, BAC-NET INTERFACE

SPLIT SYSTEM HEAT PUMP – OUTDOOR UNIT SCHEDULE

EQUIPMENT NO.	SERVICE	HEATING CAPACITY (BTU/HR)	C.O.P.	COOLING CAPACITY (BTU/HR)	SEER OR EER	ELECTRICAL	REFRIG. PIPING		MINIMUM CIRCUIT AMPS	MAXIMUM BRKR SIZE	MANUFACTURER & MODEL	OPTIONS-ACCESSORIES
						VOLT.-PH.-CY.	LIQUID	SUCTION				
CU-1	AHU-1	60,000	3.0	60,000	12.0	208/1/60	3/8	7/8	27	45	TRANE 4TTR, HEAT PUMP	
CU-2	AHU-2	60,000	3.0	60,000	12.0	208/1/60	3/8	7/8	27	45	TRANE 4TTR, HEAT PUMP	
CU-3	AHU-3	60,000	3.0	60,000	12.0	208/1/60	3/8	7/8	27	45	TRANE 4TTR, HEAT PUMP	

NOTES:

① HVAC DEMOLITION PLAN
SCALE: 1/8" = 1'



VENTILATION SCHEULE – ANSI/ASHRAE 62.1–2016

ROOM	S.F AREA	CATEGORY TYPE	OCCUPANTS	CFM OA/ PERSON	CFM OA/ PERSON	TOTAL OA CFM
CHURCH SANTUARY	3720	PLACE OF RELIGIOUS WORSHIP	600	5	0.06	3345

OUTSIDE AIR SPLIT SYSTEM WITH ELECTRIC HEAT - INDOOR UNIT SCHEDULE

MARK	SUPPLY FAN DATA					COOLING CAP @ 105 AMB.				HEATING CAP			VOLTS	PHASE	MFG.	MODEL	REMARKS
	CFM	O.A.	E.S.P.	H.P.	RPM.	E.D.B.	E.W.B.	TOTAL	SENSIBLE	KW(AUX.)	MBH OUTPUT	AMBIENT					
04HU	1000	1000	0.25	-	-	90	79	81.3MBH	39.4MBH	10	34MBH	30 DEG	208	3	GREENHECK	RV	NOTE6 BELOW

NOTES:

1. HORIZONTAL SUPPLY, NO EXHAUST
2. NO ENERGY RECOVERY WHEEL
3. VARIABLE SPEED CONDENSER FAN
4. TEFC EVAPORATOR MOTOR WITH VARIABLE SPEED DRIVE
5. MERV 14 FILTER
6. HIGH EFFICIENCY CONDENSER FAN
7. AIR FOIL EVAPORATOR FAN
8. HEATING, COOLING/DEHUMIDIFICATION, FAN ONLY AND UNOCCUPIED MODES
9. TWO STAGE HEATING WITH SCR CONTROL
10. BAC-NET INTERFACE

NOT FOR CONSTRUCTION

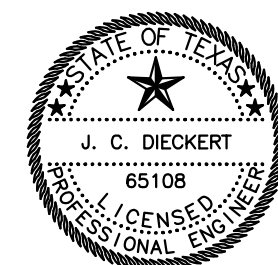
JCD					
P1	4/29/20	FOR APPROVAL	JCD	JCD	BC
REV #	DATE	REVISION RECORD	DR.	CK.	APD.

DWG. NO.	REFERENCE DRAWINGS
2019 EXTERIOR REPAIRS ST MARY'S CATHEDRAL BASILICA 1010 35TH STREET GALVESTON, TX	

HVAC DEMO PLAN AND SCHEDULES

SCALE: 1/8"=1'		DATE: 4/29/20	
DRAWN: JCD		CHECKED: BC	APPROVED: JCD

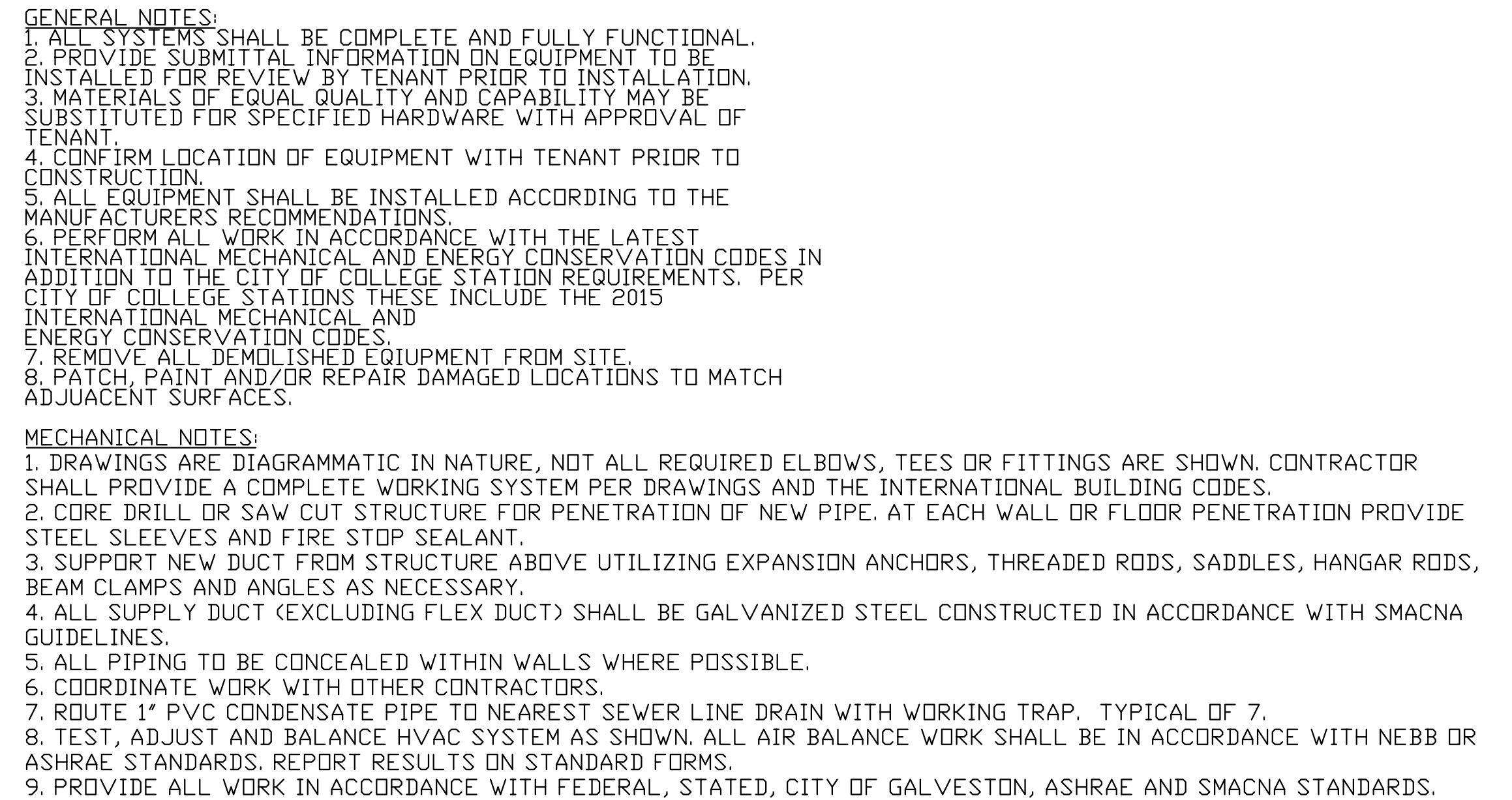
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SPLIT SYSTEM – INDOOR UNIT SCHEDULE												
EQUIPMENT NO.	SERVICE	SUPPLY CFM	MIN. O.A. AIR CFM	EXT. S.P. (IN. W.G.)	COOLING CAPACITY (BTU/HR.)	LATENT COOLING CAPACITY (BTU/HR.)	ELECTRIC RESIST. HEATING		ELECTRICAL		MANUFACTURER & MODEL	OPTIONS-ACCESSORIES
							KW	MBH	VOLT.-PH.-CY.	AMPS		
AHU-4	WEST SANCTUARY	4000	585	1.25	120,000	27,330	10	34	208/3/60	40	TRANE TWE	BAC-NET INTERFACE
AHU-5	EAST SANCTUARY	6000	880	1.25	180,000	41,000	15	51	208/3/60	60	TRANE TWE	BAC-NET INTERFACE
AHU-6	EAST SANCTUARY	6000	880	1.25	180,000	41,000	15	51	208/3/60	60	TRANE TWE	BAC-NET INTERFACE


SPLIT SYSTEM – OUTDOOR CONDENSER SCHEDULE												
EQUIPMENT NO.	SERVICE	HEATING CAPACITY (BTU/HR)	C.O.P.	COOLING CAPACITY (BTU/HR)	SEER OR EER	ELECTRICAL	REFRIG. PIPING		MINIMUM CIRCUIT AMPS	MAXIMUM BRKR SIZE	MANUFACTURER & MODEL	OPTIONS-ACCESSORIES
						VOLT. – PH. – CY.	LIQUID	SUCTION				
CU0A	OAHU	–	–	87,300	11.3	208/1/60	3/8	7/8	27	45	TRANE 4TTR, HEAT PUMP	
CU-4	AHU-4	–	–	120,000	11.3	208/3/60	1/2	1-3/8	41	50	TRANE TTA	
CU-5&6	AHU-5 & 6	–	–	180,000	11.3	208/3/60	1/2	1-3/8	66.3	80	TRANE 4TTR, HEAT PUMP	

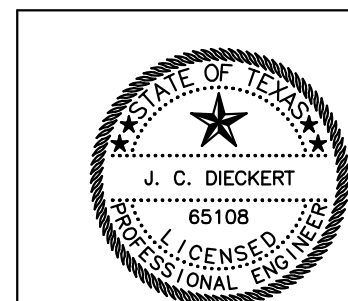
- ① PAIR OF 1/2 AND INSULATED 1-3/8" COPPER REFRIGERANT LINES,
- ② TRANSITION FROM UNITS TO SINGLE DUCT AT NO GREATER THAN A 45- ANGLE. INSULATE EXTERNALLY
- ③ PROVIDE 16X16 EXTERNALLY INSULATED OA DUCT TO EACH UNIT
- ④ EXTERNALLY INSULATED 16X32 DUCT WITH MERV14 FINAL AND MERV 8 PRE FILTERS IN RACK
- ⑤ 24X48 ARCHITECTURAL WALL INTAKE LOUVER CONNECTED AND SEALED TO OUTSIDE AIR DUCT
- ⑥ 3/8 AND INSULATED 7/8" COPPER REFRIGERANT LINES,
- ⑦ PROVIDE BALANCE DAMPERS WITH LOCKING QUADRANTS IN DUCT, TYP. OF 2. ALSO PROVIDE RETURN PLENUM EXTENSION WITH RETURN BALANCE DAMPER IN EACH UNIT.
- ⑧ PROVIDE EXTERNALLY INSULATED DUCT FROM DOAHU DISCHARGE TIED INTO EXISTING DUCT
- ⑨ PROVIDE 18X18 EXTERNALLY INSULATED DUCT FROM OUTSIDE AIR LOUVRE TO DOAHU INLET ASH SHOWN
- ⑩ 1/2 AND INSULATED 1-3/8" COPPER REFRIGERANT LINES,
- ⑪ 3/8 AND INSULATED 7/8" COPPER REFRIGERANT LINES,
- ⑫ PROVIDE 14X14 EXTERNALLY INSULATED DUCT FROM OUTSIDE AIR LOUVRE TO DOAHU INLET ASH SHOWN. PROVIDE OA AND RETURN BALANCE DAMPERS

NOT FOR CONSTRUCTION

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DWG. NO.	REFERENCE DRAWINGS
2019 EXTERIOR REPAIRS ST MARY'S CATHEDRAL BASILICA 1010 36TH STREET GALVESTON, TX	
HVAC PLAN AND SCHEDULES PPA 060761641	

SCALE: 1/8"=1'		DATE: 4/29/20	
DRAWN: JCD	CHECKED: BC	APPROVED: JCD	
 <p>Dega Engineering CONSULTING ENGINEERS 2114 A WJW PKWY EAST DRYDEN TX 77802 PHONE: (979) 774-0855 - TBEQ#F1821</p>			
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DWG. B-
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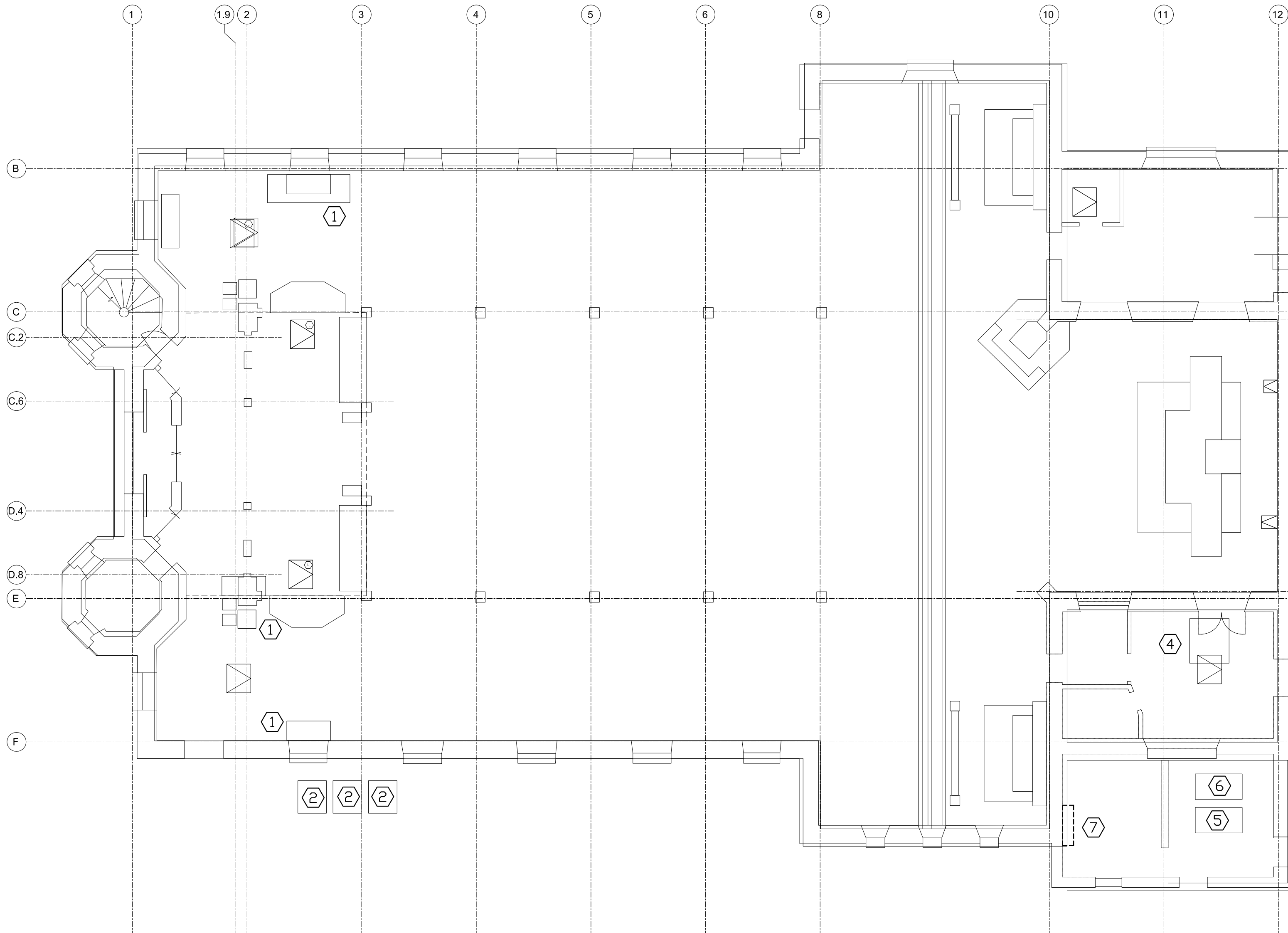
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1 ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" = 1'



NOT FOR CONSTRUCTION

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ELECTRICAL NOTES:

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 2. SUPPORT NEW RACEWAYS AND FIXTURES FROM STRUCTURE ABOVE UTILIZING EXPANSION ANCHORS, THREADED RODS, SADDLES, HANGAR RODS, BEAM CLAMPS AND ANGLES AS NECESSARY.
 3. ALL RACEWAYS TO BE CONCEALED WITHIN WALLS AND ABOVE CEILINGS WHERE POSSIBLE.
 4. COORDINATE WORK WITH OTHER CONTRACTORS.
 5. PROVIDE LOCAAL DISCONNECTS FOR ROOF TO AIR CONDITIONING UNITS.
 6. VERIFY THE CORRECT HACR TYPE CIRCUIT BREAKERS AND CONDUCTOR SIZES FOR ROOF TOP AIR CONDITIONERS WITH MECHANICAL CONTRACTOR ACTUAL INSTALLED EQUIPMENT.
- CIRCUITS SHOWN ARE ESTIMATED.

KEYED NOTES

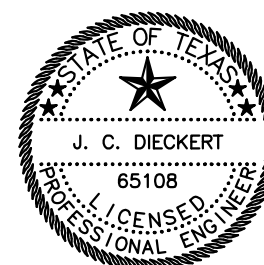
- 1 DISCONNECT POWER TO EXISTING 5 TON AIR HANDLER.
- 2 DISCONNECT POWER TO EXISTING 5 TON AIR CONDENSER.
- 3 DISCONNECT POWER TO EXISTING 30 TON AIR HANDLER.
- 4 DISCONNECT POWER TO EXISTING 10 TON AIR HANDLER.
- 5 DISCONNECT POWER TO EXISTING 30 TON CONDENSER.
- 6 DISCONNECT POWER TO EXISTING 10 TON CONDENSER.
- 7 DEMOLISH EXISTING 800A, 3P DISCONNECT(TO BE REPLACED BY NEW PANEL)

P1	4/29/20	FOR APPROVAL	JCD	BC	JCD
REV #	DATE	REVISION RECORD	DR.	CK.	APD.

DWG. NO. REFERENCE DRAWINGS
2019 EXTERIOR REPAIRS
ST MARY'S CATHEDRAL BASILICA
1010 35TH STREET
GALVESTON, TX

DEMOLITION
POWER PLAN

SCALE: 1/8" = 1' DATE: 4/29/20
DRAWN: JCD CHECKED: BC APPROVED: JCD



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DWG. B-
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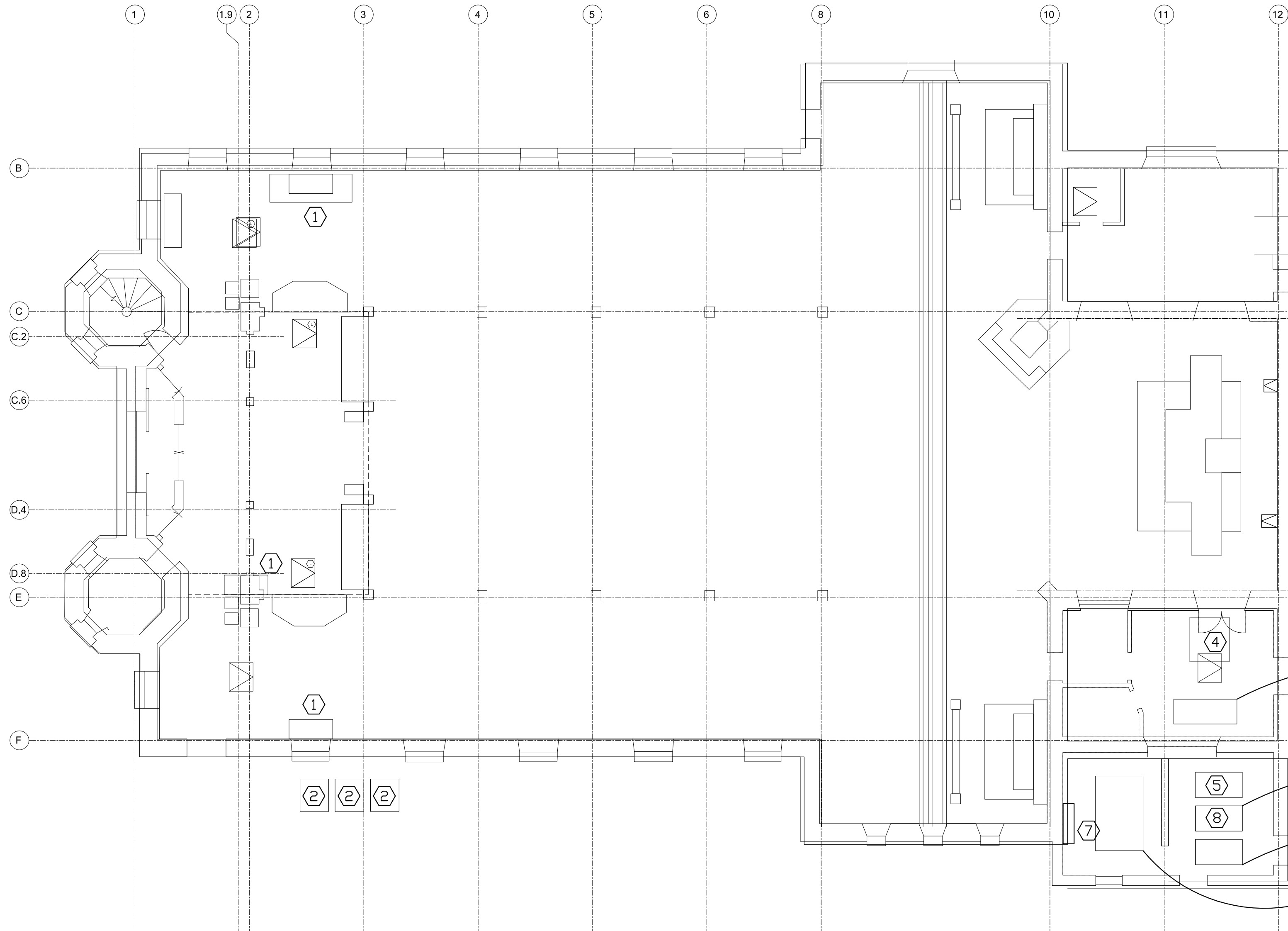
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5. PROVIDE LOCAL DISCONNECTS FOR ROOF TO AIR CONDITIONING UNITS.
6. VERIFY THE CORRECT HACR TYPE CIRCUIT BREAKERS AND CONDUCTOR SIZES FOR ROOF TOP AIR CONDITIONERS WITH MECHANICAL CONTRACTOR ACTUAL INSTALLED EQUIPMENT.
- CIRCUITS SHOWN ARE ESTIMATED.

KEYED NOTES

- ① RE-CONNECT POWER TO NEW 5 TON AIR HANDLER.
- ② RE-CONNECT POWER TO NEW 5 TON AIR CONDENSER.
- ③ NEW 225A 3P, 3WIRE WITH GROUND PANEL. "HVAC" FEED WITH CONDUCTORS FROM DEMOLISHED 30 TON UNIT
- ④ RE-CONNECT POWER TO NEW 10 TON AIR HANDLER AHU-4
- ⑤ RE-CONNECT POWER TO NEW 10 TON CONDENSER CU-4(ON ROOF ABOVE)
- ⑥ DISCONNECT POWER TO EXISTING 10 TON CONDENSER.
- ⑦ NEW 800 AMP, 3P, 4WIRE WITH GROUND PANEL(MP), SCHNIEDER HCJ
- ⑧ PROVIDE NEW LOCAL DISCONNECTS FOR CONDENSERS, TYPE OF 4

① ELECTRICAL POWER PLAN
SCALE: 1/8" = 1'



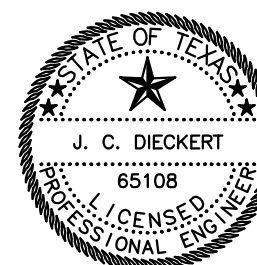
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2019 EXTERIOR REPAIRS
ST MARY'S CATHEDRAL BASILICA
1010 35TH STREET
GALVESTON, TX

POWER
PLAN

SCALE: 1/8" = 1' DATE: 6/29/20
DRAWN: JCD CHECKED: BC APPROVED: JCD



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